

REMARKS

Claims 1, 3, and 7-13 are pending. All claims are rejected.

Interview Statement:

Applicants appreciate the Examiner's courtesy in granting the telephone interview of February 13, 2009 with Applicants' representative, Jerrick J. Ho (Reg. No. 63,763). Applicants noted that JP '105 lacks the feature "the bottom wall of the outer hollow-cylindrical portion has a taper part so that that an outer diameter of the bottom wall becomes smaller toward the front end" as recited in claim 1. The Examiner recognized this deficiency and indicated that he would conduct a further search to determine if the invention is patentable based on this feature.

Applicants' representative further urged that a skilled artisan would not combine JP '807 with JP '105 because the gas inlets of JP '807 face the taper part of the inner protector and because no portion of the outer cylinder of JP '105 faces such a taper part. Applicants' representative pointed to claims 7 and 8 of JP '807 to support this feature of JP '807. The Examiner responded that JP '807 disclose various embodiments with gas inlets not facing the taper part (citing Figs. 7 and 9l). No agreement was reached on this latter point.

Response to the Office Action:

I. Rejection under 35 U.S.C. § 103

A. Claims 1, 3 and 7-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over a machine translation to English of Greiser et al. (Japanese Patent Publication 2002-236105)(JP '105) in view of a machine translation to English of Mankino et al. (Japanese Patent Publication 2001-099807)(JP '807).

The Examiner considered JP ‘105 as meeting each of the features of claim 1, except for (1) outer-wall gas inlet openings having guiding bodies extending inward and (2) the tip end of the taper part of the bottom wall of the outer hollow-cylindrical portion facing the taper part of the side wall of the inner hollow-cylindrical portion. The Examiner cited JP ‘807 as disclosing the first feature (Fig. 5a) and the second feature (Fig. 9k). The reason for rejection was that it would have been obvious to include the features as taught by JP ‘807 in the sensor of JP ‘105 so as to generate a circular flow of gas and thereby separate the gas from any liquid droplets (citing the Abstract of JP ‘807).

As noted, the Examiner also referred to various embodiments of JP ‘807 with gas inlets not facing the taper part (citing Figs. 7 and 9l).

Applicants respond as follows.

First, JP ‘105 does not teach the features for which it is cited. In particular, JP ‘105 does not teach that “the bottom wall of the outer hollow-cylindrical portion has a taper part so that that an outer diameter of the bottom wall becomes smaller toward the front end” as asserted by the Examiner. Referring to Figure 1 of JP ‘105, the *outer* hollow-cylindrical portion does not have a taper portion. Rather, the outer hollow-cylindrical portion of JP ‘105 maintains the same outer diameter of the side wall until it terminates at the bottom wall. JP ‘807 does not remedy this deficiency of JP ‘105.

Applicants submitted essentially the same argument in the Amendment of October 6, 2008 at page 10: “In JP ‘105, the tip end of the bottom wall of the outer hollow-cylindrical portion faces a *straight wall* portion of the inner hollow-cylindrical portion and not a taper part

of the side wall of the inner hollow cylindrical portion as shown in Fig. 7A and as claimed in amended claim 1. JP '807 also does not show this feature of the invention.”

For this reason alone, it is respectfully submitted that claims 1, 3 and 7-12 are patentable over the cited prior art.

Further, contrary to the Examiner’s contention, one of ordinary skill in the art would not have combined JP '105 and JP '807 in the manner described.

In JP '807, the gas-inlet opening 63 formed in the side wall of the outer protector faces the taper part of the side wall of the inner protector (Fig. 9k). As recited in Claims 7 and 8 of JP '807 (see para [0016] and [0019], respectively), the feature that the gas inlet opening formed in the side wall of the outer protector faces the taper part of the side wall of the inner protector is a main feature of the protector in JP '807. This feature is also shown Figs. 3, 6 and 8 and described at paragraph [0019] of the translation supplied by the Examiner. Further, the outer cylinder of JP '105 does not face the taper part of the side wall of the inner protector.

However, even if JP '807 does disclose various embodiments with gas inlets not facing the taper part (citing Figs. 7 and 9(1)), JP '807 does not teach or suggest the claimed feature of “an outer circumferential face of the side wall of the inner hollow-cylindrical portion positioned opposite to the outer-wall gas inlet openings is formed so as to be parallel to an outer circumferential face of the side wall of the outer hollow-cylindrical portion or so as to have a slope-like shape with a diameter enlarging in an axial direction toward the bottom wall of the protector.”

Further, Fig. 9(1) of JP '807 teaches that the portion to which the gas inlet opening of the outer protector faces is not a wall but an opening of the inner protector. In other words, the size and location of the gas inlet opening of the outer protector matches the size and location of the opening of the inner protector.

Accordingly, a skilled artisan would not (and could not) have combined the teachings in the manner asserted.

Reconsideration and withdrawal of the rejection are respectfully requested.

B. Claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over JP '105 in view of JP '807.

Examiner considered JP '105 as meeting each of the features of claim 13, except for (1) outer-wall gas inlet openings having guiding bodies extending inward and (2) the tip end of the taper part of the bottom wall of the outer hollow-cylindrical portion facing the taper part of the side wall of the inner hollow-cylindrical portion. The Examiner cited JP '807 as disclosing the first feature (Fig. 5a) and the second feature (Fig. 9k). The reason for rejection was that it would have been obvious to include the feature as taught by JP '807 in the sensor of JP '105 so as to generate a circular flow of gas and thereby separate the gas from any liquid droplets (citing the Abstract of JP '807).

As stated, contrary to the Examiner's contention, one of ordinary skill in the art would not have combined JP '105 and JP '807 in the manner described.

In JP '807, the gas-inlet opening 63 formed in the side wall of the outer protector faces the taper part of the side wall of the inner protector (Fig. 9k). As recited in Claims 7 and 8 of JP

‘807, the feature that the gas inlet opening formed in the side wall of the outer protector faces the taper part of the side wall of the inner protector is a main feature of the protector in JP ‘807.

This feature is also shown Figs. 3, 6 and 8 and described at paragraph [0019] of the translation supplied by the Examiner. However, the outer cylinder of JP ‘105 does not face the taper part of the side wall of the inner protector.

Regarding the various embodiments cited by the Examiner, JP ‘807 does not teach nor suggest “an outer circumferential face of the side wall of the inner hollow-cylindrical portion positioned opposite to the outer-wall gas inlet openings is formed so as to be parallel to an outer circumferential face of the side wall of the outer hollow-cylindrical portion or so as to have a slope-like shape with a diameter enlarging in an axial direction toward the bottom wall of the protector.”

Fig. 9(1) of JP ‘807 teaches that the portion to which the gas inlet opening of the outer protector faces is not a wall but an opening of the inner protector. In other words, the size and location of the gas inlet opening of the outer protector matches the size and location of the opening of the inner protector.

Accordingly, a skilled artisan would (and could not) have combined the teachings in the manner asserted.

Further, JP ‘105 does not teach the features for which it is cited. In particular, JP ‘105 does not teach that “the outer hollow-cylindrical portion is formed into a bottomed cylinder, and a bottom wall of the outer hollow-cylindrical portion is disposed nearer to the front end than the inner hollow-cylindrical portion, so that the bottom wall of the outer hollow-cylindrical portion

is made a bottom wall positioned at an utmost front end of the protector” as recited in claim 13. The Examiner cited the outer part of 25 in Fig. 1 of JP ‘105 as meeting the claimed feature. The utmost front end of the protector of JP ‘105, however, is formed from the inner hollow-cylindrical portion. In contrast, Applicants teach that the utmost front end is formed from the outer hollow-cylindrical portion, as shown in the non-limiting embodiment of Fig. 6.

Reconsideration and withdrawal of the rejection are respectfully requested.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

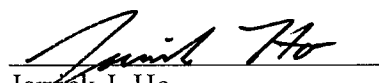
SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

23373

CUSTOMER NUMBER

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Jerick J. Ho
Registration No. 63,763